

ABSTRACT OF THE DISCLOSURE

To measure a convex mirror, a reference beam and a measurement beam are both provided through a single optical fiber. A positive auxiliary lens is placed in the system to give a converging wavefront onto the convex mirror under test. A measurement is taken that includes the aberrations of the convex mirror as well as the errors due to two transmissions through the positive auxiliary lens. A second measurement provides the information to eliminate this error. A negative lens can also be measured in a similar way. Again, there are two measurement set-ups. A reference beam is provided from a first optical fiber and a measurement beam is provided from a second optical fiber. A positive auxiliary lens is placed in the system to provide a converging wavefront from the reference beam onto the negative lens under test. The measurement beam is combined with the reference wavefront and is analyzed by standard methods. This measurement includes the aberrations of the negative lens, as well as the errors due to a single transmission through the positive auxiliary lens. A second measurement provides the information to eliminate this error.